

## High Triglycerides Are Associated with Low Thrombocyte Counts and High VEGF in Nephropathia Epidemica

Martynova E., Valiullina A., Gusev O., Davidyuk Y., Garanina E., Shakirova V., Khaertynova I., Anokhin V., Rizvanov A., Khaiboullina S.

*Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia*

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### Abstract

© 2016 Ekaterina V. Martynova et al. Nephropathia epidemica (NE) is a mild form of hemorrhagic fever with renal syndrome. Several reports have demonstrated a severe alteration in lipoprotein metabolism. However, little is known about changes in circulating lipids in NE. The objectives of this study were to evaluate changes in serum total cholesterol, high density cholesterol (HDCL), and triglycerides. In addition to evaluation of serum cytokine activation associations, changes in lipid profile and cytokine activation were determined for gender, thrombocyte counts, and VEGF. Elevated levels of triglycerides and decreased HDCL were observed in NE, while total cholesterol did not differ from controls. High triglycerides were associated with both the lowest thrombocyte counts and high serum VEGF, as well as a high severity score. Additionally, there were higher levels of triglycerides in male than female NE patients. Low triglycerides were associated with upregulation of IFN- $\gamma$  and IL-12, suggesting activation of Th1 helper cells. Furthermore, levels of IFN- $\gamma$  and IL-12 were increased in patients with lower severity scores, suggesting that a Th1 type immune response is playing protective role in NE. These combined data advance the understanding of NE pathogenesis and indicate a role for high triglycerides in disease severity.

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